SIEMENS

Data sheet 3RT2023-1NP30



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 200-280 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S0
product extension	
 function module for communication 	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	0.6 W
 at AC in hot operating state per pole 	0.2 W
 without load current share typical 	1.9 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
of main circuit rated value	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,5g / 5 ms, 4,7g / 10 ms
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 10 ms
• at DC	15g / 5 ms, 10g / 10 ms
mechanical service life (operating cycles)	
 of contactor typical 	10 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.549 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C

during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30	95 %
maximum	
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	59.7 kg
global warming potential [CO2 eq] during manufacturing	3.7 kg
global warming potential [CO2 eq] during operation	56.6 kg
global warming potential [CO2 eq] after end of life	-0.626 kg
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
 at AC-3 rated value maximum 	690 V
at AC-3e rated value maximum	690 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	40 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
• at AC-3	
— at 400 V rated value	9 A
— at 500 V rated value	9 A
— at 690 V rated value	9 A
• at AC-3e	
— at 400 V rated value	9 A
— at 500 V rated value	9 A
— at 690 V rated value	9 A
at AC-4 at 400 V rated value	8.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	7.4 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	11.4 A
— up to 400 V for current peak value n=20 rated value	11.4 A
— up to 500 V for current peak value n=20 rated value	9.1 A
— up to 690 V for current peak value n=20 rated value	9 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	7.6 A
— up to 400 V for current peak value n=30 rated value	7.6 A
— up to 500 V for current peak value n=30 rated value	6.1 A
— up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1 rated	6.1 A 10 mm ²
value operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	4.1 A
at 400 V rated value at 690 V rated value	3.3 A
operational current	0.0 A
at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	20 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1.A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.4 A 0.25 A
with 2 current paths in series at DC-1	0.2071
— at 24 V rated value	35 A
	35 A
— at 60 V rated value	33 A

at 440 V rated value	0F A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1.4
— at 600 V rated value	0.8 A
with 3 current paths in series at DC-1	05.4
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1.4
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-2 at 400 V rated value	4 kW
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	7.5 kW
operating power for approx. 200000 operating cycles at AC-	
at 400 V rated value	2 kW
at 690 V rated value	2.5 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	4.5 kVA
up to 400 V for current peak value n=20 rated value	7.8 kVA
up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value	7.8 kVA
up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value	10.7 kVA
operating apparent power at AC-6a	ion kort
up to 230 V for current peak value n=30 rated value	3 kVA
up to 400 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value	5.2 kVA
up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value	5.2 kVA
 up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value 	7.2 kVA
short-time withstand current in cold operating state up to	1.2 NVA
40 °C	
• limited to 1 s switching at zero current maximum	170 A; Use minimum cross-section acc. to AC-1 rated value
-	

# limited to 10 is switching at 200 current maximum # limited to 10 is switching at 200 current maximum # limited to 30 is switching at 200 current maximum # limited to 30 is switching at 200 current maximum # limited to 30 is switching at 200 current maximum # limited to 30 is switching at 200 current maximum # limited to 30 is switching at 200 current maximum # at 10 C # at 10 C # at 10 C # at 10 C # at 20 C #	a limited to E.o. quitables at sere current and include	470 At Llea minimum areas acation and to AC 4 metal disclusion
Filmidad to 50 is switching at zero current maximum 104 At Use minimum cross-section soc. to AC-1 rated value 1500 I/h 1500	limited to 5 s switching at zero current maximum	170 A; Use minimum cross-section acc. to AC-1 rated value
** imitted to 0.9 a switching at zero current maximum 88 Å. Use minimum cross-section acc. to AC-1 rated value no-local switching requency 1500 s.h 1500 s.	-	
no-load writching frequency	-	
### ### ##############################		88 A; Use minimum cross-section acc. to AC-1 rated value
■ # IDC operating frequency ■ # AC-1 maximum 1 000 1/h ■ AC-2 maximum 1 000 1/h ■ AC-3 maximum 200 1/m 200 280 V ■ 4 05 Hz rated value 200 280 V ■ 4 05 Hz rated value 200 280 V ■ 4 05 Hz rated value 200 280 V ■ 4 05 Hz rated value 200 280 V ■ 4 05 Hz rated value 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7 ■ 1.1 ■ 1.1 □ 0 7		4 500 A/L
operating frequency * all AC-1 maximum * all AC-3 maximum * all AC-4 maximum * all		
Al AC-1 maximum		1 500 1/n
		4.000.4//
• al AC-3 maximum		
** AC-4 maximum 300 1/h		
Control circuité Control Type of voltage of the control supply voltage of voltage of the control supply voltage at 60 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC of the surge suppressor initial value operating range factor control supply voltage rated value of magnet coil at AC of the surge suppressor initial value operating range factor control supply voltage rated value of magnet coil at AC of 50 Hz of 10 Hz design of the surge suppressor with variator innush current peak duration of inush current peak duration of inush current peak duration of inush current man value of 10 A of 50 Hz of 60 Hz of 711 design of the surge suppressor with variator innush current peak 0.13 A duration of inush current peak 0.13 A duration of incided-rotor current peak 0.13 A duration of incided-rotor current 180 ms holding current mean value 17 mA supparent pick-up power of magnet coil at AC of 50 Hz of 50 Hz of 60 Hz of 60 Hz of 714 inductive power factor with closing power of the coil of at maximum rated control supply voltage at DC of at maximum rated control supply voltage at DC of at maximum rated control supply voltage at DC of the maximum rated control supply voltage at DC of the maximum rated control supply voltage at AC of 60 Hz of		
type of voltage of the control supply voltage control supply voltage at AC at 60 Hz raded value control supply voltage at DC raded value operating range factor control supply voltage rated value of magnet coil at DC e		300 1/n
ontrol supply voltage at AC ■ at 60 Hz rated value ■ at 60 Hz rated value ■ 200 280 V 200 210 V 2		A0/D0
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• at 60 Hz rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 80 Hz other current peak duration of invision current peak coked-rotor current peak duration of invision current peak duration of invision current peak duration of inosed-rotor current holding current mean value other coil other coil at AC • at 50 Hz • at 80 Hz • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at AC • at 80 Hz • at 80		000 000 1/
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operating range factor control supply voltage rated value of megnot coil at DC • Initial value • Initial v		
magnet coll at DC		200 280 V
• Initial value • full-scale value • titl-scale value • at 50 Hz • at 50 Hz • at 60 Hz • at		
e full-scale value operating range factor control supply voltage rated value of magnet coil at AC e at 50 HZ ot 50 HZ ot 50 HZ design of the surge suppressor with varistor Inrush current peak locked-rotor current peak locked-rotor current mean value locked-rotor current mean value locked-rotor current peak ot 13 A duration of 10 cked-rotor current holding current mean value 17 mA apparent pick-up power of magnet coil at AC e at 50 HZ e at 60 HZ locked-rotor with closing power of the coil e at 50 HZ ot minimum rated control supply voltage at DC at maximum rated control supply voltage at AC e at minimum rated control supply voltage at AC at maximum rated control supply voltage at AC at 50 HZ at maximum rated control supply voltage at AC at 50 HZ at bull ductive power factor with the holding power of the coil at 50 HZ at 50 HZ at 50 HZ at 50 HZ bull ductive power factor with the holding power of the coil at 50 HZ at 50 HZ bull ductive power factor with the holding power of the coil at 50 HZ bull ductive power factor with the holding power of the coil at 50 HZ bull ductive power factor with the holding power of the coil at 50 HZ bull ductive power factor with the holding power of the coil at 50 HZ bull ductive power factor with the hold		0.7
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magnet coil at AC • at 50 Hz • at 60 Hz • at maximum rated control supply voltage at DC • at 60 Hz • at maximum rated control supply voltage at AC • at 60 Hz • at 60 Hz • at maximum rated control supply voltage at AC • at 60 Hz • at 60 Hz • at maximum rated control supply voltage at AC • at 60 Hz • at maximum rated control supply voltage at AC • at 60 Hz • at maximum rated control supply voltage at AC • at 60 Hz • at maximum rated control supply voltage at AC • at 60 Hz • at 60 Hz • at 50 Hz • at 60 Hz • at		
e at 60 Hz		
design of the surge suppressor with variator	● at 50 Hz	0.7 1.1
Inrush current peak	• at 60 Hz	0.7 1.1
duration of inrush current peak 30 µs locked-rotor current mean value 0.1 A locked-rotor current peak 0.13 A duration of locked-rotor current 180 ms holding current mean value 17 mA apparent pick-up power of magnet coil at AC at 50 Hz 12,7 VA at 60 Hz 14,7 VA inductive power factor with closing power of the coil at 50 Hz 0.98 apparent holding power at minimum rated control supply voltage at DC 1.9 VA apparent holding power at maximum rated control supply voltage at DC 1.9 VA apparent holding power at maximum rated control supply voltage at AC at maximum rated control supply voltage at AC at maximum rated control supply voltage at AC at 50 Hz 3.9 VA at 60 Hz 3.9 VA apparent holding power of magnet coil at AC at 50 Hz 3.9 VA apparent holding power of magnet coil at AC at 50 Hz 3.9 VA at 60	design of the surge suppressor	with varistor
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locked-rotor current peak duration of locked-rotor current holding current mean value apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at AC - at 50 Hz - at 60 Hz • at maximum rated control supply voltage at AC - at 50 Hz - at 60 Hz apparent holding power of magnet coil at AC • at so Hz - at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 50 Hz • at 60 Hz 1.9 VA 4.3 VA apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz 1.9 VA 5.0 LS 5.0 LS 5.0 LS 6.0 LS	duration of inrush current peak	30 µs
duration of locked-rotor current holding current mean value apparent pick-up power of magnet coil at AC at 50 Hz at 50 Hz 12.7 VA at 60 Hz 14.7 VA inductive power factor with closing power of the coil at 50 Hz at 60 Hz 0.98 apparent holding power at minimum rated control supply voltage at DC at maximum rated control supply voltage at DC at minimum rated control supply voltage at DC at minimum rated control supply voltage at AC at minimum rated control supply voltage at AC at minimum rated control supply voltage at AC at 50 Hz at maximum rated control supply voltage at AC at 50 Hz at maximum rated control supply voltage at AC at 50 Hz at maximum rated control supply voltage at AC at 50 Hz at 60 Hz at 50 Hz at 60 Hz at 60 Hz at 60 Hz at 60 Hz binductive power factor with the holding power of the coil at 50 Hz at 60 Hz binductive power factor with the holding power of the coil at 50 Hz at 60 Hz binductive power factor with the holding power of the coil at 50 Hz at 60 Hz binductive power of magnet coil at DC at 50 Hz binductive power of magnet coil at DC binding power of magnet coil at	locked-rotor current mean value	0.1 A
holding current mean value apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at AC — at 50 Hz • at 60 Hz • at maximum rated control supply voltage at AC — at 50 Hz • at maximum rated control supply voltage at AC — at 50 Hz • at 60 Hz • at 60 Hz • at 60 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60	locked-rotor current peak	0.13 A
apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz • at 60 Hz • at maximum rated control supply voltage at DC • at maximum rated control supply voltage at DC • at minimum rated control supply voltage at AC • at 50 Hz • at most maximum rated control supply voltage at AC • at 50 Hz • at maximum rated control supply voltage at AC • at 50 Hz • at maximum rated control supply voltage at AC • at 50 Hz • at maximum rated control supply voltage at AC • at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at 60 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at 60 H	duration of locked-rotor current	180 ms
■ at 50 Hz ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at 50 Hz ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at minimum rated control supply voltage at DC ■ at minimum rated control supply voltage at DC ■ at maximum rated control supply voltage at DC ■ at minimum rated control supply voltage at AC ■ at minimum rated control supply voltage at AC ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at 50 Hz ■ at 60 Hz	holding current mean value	17 mA
at 60 Hz inductive power factor with closing power of the coil at 50 Hz at 60 Hz 0.98 apparent holding power at minimum rated control supply voltage at DC at maximum rated control supply voltage at DC at minimum rated control supply voltage at DC at minimum rated control supply voltage at AC at 50 Hz at 60 Hz at maximum rated control supply voltage at AC at 50 Hz at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz at 50 Hz at 60 Hz 1.9 VA 3.9 VA 4.3 VA apparent holding power of magnet coil at AC at 50 Hz by W closing power of magnet coil at DC tolsing power of magnet coil at DC closing delay at AC at 60 Ms by W closing delay at AC 50 80 ms	apparent pick-up power of magnet coil at AC	
inductive power factor with closing power of the coil at 50 Hz at 60 Hz 0.98 apparent holding power at minimum rated control supply voltage at DC at maximum rated control supply voltage at DC apparent holding power at minimum rated control supply voltage at DC apparent holding power at minimum rated control supply voltage at AC at 50 Hz at 60 Hz at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz bloing power of magnet coil at DC at 60 Hg Mg closing power of magnet coil at DC at 60 Mg closing power of magnet coil at DC bloing power of magnet coil at DC closing delay at AC at MB bloing power of magnet coil at DC closing delay at AC 50 80 ms	● at 50 Hz	12.7 VA
at 50 Hz at 60 Hz apparent holding power at minimum rated control supply voltage at DC at maximum rated control supply voltage at DC apparent holding power at minimum rated control supply voltage at AC apparent holding power at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz at 50 Hz — at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz at 6	● at 60 Hz	14.7 VA
apparent holding power at minimum rated control supply voltage at DC at maximum rated control supply voltage at DC at maximum rated control supply voltage at DC apparent holding power at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz at maximum rated control supply voltage at AC — at 50 Hz — at 50 Hz — at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz by W closing power of magnet coil at DC at AC at AC 50 80 ms	inductive power factor with closing power of the coil	
apparent holding power • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC apparent holding power • at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz • at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz • at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at 60 Hz • at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC 1.9 W closing delay • at AC 50 80 ms	● at 50 Hz	0.98
at minimum rated control supply voltage at DC apparent holding power at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz at 60 Hz — at 60 Hz apparent holding power of magnet coil at AC at 60 Hz 50 80 ms	● at 60 Hz	0.98
apparent holding power at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz at 60 Hz at 60 Hz at 50 Hz — at 60 Hz at 50 Hz at 60 Hz bolding power of magnet coil at DC at 60 Hz bolding power of magnet coil at DC 1.9 W closing delay at AC 50 80 ms	apparent holding power	
apparent holding power • at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz • at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz 3.9 VA 4.3 VA apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz inductive power of magnet coil at DC to 50 closing power of magnet coil at DC holding power of magnet coil at DC to 3.9 VA 4.3 VA 1.9 W closing delay • at AC 50 80 ms	 at minimum rated control supply voltage at DC 	1.9 VA
at minimum rated control supply voltage at AC — at 50 Hz — at 60 Hz at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz — at 60 Hz 3.9 VA — at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz 3.9 VA apparent holding power of magnet coil at AC at 50 Hz at 60 Hz 50 Hz 1.9 W closing power of magnet coil at DC 1.9 W closing delay at AC 50 80 ms	at maximum rated control supply voltage at DC	1.9 VA
- at 50 Hz	apparent holding power	
- at 60 Hz • at maximum rated control supply voltage at AC - at 50 Hz - at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz 3.9 VA at 60 Hz 3.9 VA • at 60 Hz 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz 1.9 W closing power of magnet coil at DC tolsing delay • at AC • at maximum rated control supply voltage at AC 3.9 VA 4.3 VA 4.3 VA 5.9	 at minimum rated control supply voltage at AC 	
at maximum rated control supply voltage at AC — at 50 Hz — at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz 3.9 VA at 60 Hz 3.9 VA at 60 Hz 4.3 VA inductive power factor with the holding power of the coil at 50 Hz at 60 Hz 0.51 at 60 Hz 1.9 W closing power of magnet coil at DC tolosing delay at AC 50 80 ms	— at 50 Hz	3.9 VA
- at 50 Hz - at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz • at 50 Hz • at 60 Hz inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at 60 Hz • at 60 Hz Closing power of magnet coil at DC holding power of magnet coil at DC to sing delay • at AC • at AC **The state of the coil of the	— at 60 Hz	4.3 VA
- at 60 Hz apparent holding power of magnet coil at AC ● at 50 Hz ● at 60 Hz • at 60 Hz inductive power factor with the holding power of the coil ● at 50 Hz ● at 60 Hz 0.51 • at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC tosing delay ● at AC 4.3 VA 4.3 VA 0.51 0.56 1.9 W closing delay • at AC	 at maximum rated control supply voltage at AC 	
apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 50 Hz • at 50 Hz • at 50 Hz • at 50 Hz • at 50 Hz • at 50 Hz • at 60 Hz • at 60 Hz • at 60 Hz • at 60 Hz Closing power of magnet coil at DC holding power of magnet coil at DC to sing delay • at AC • at AC • at 50 Hz • at 50 Hz • at 50 Hz 50 80 ms		3.9 VA
at 50 Hz at 60 Hz at 60 Hz inductive power factor with the holding power of the coil at 50 Hz at 60 Hz o at 60 Hz other factor with the holding power of the coil 1.9 W closing delay at AC 3.9 VA 4.3 VA 3.9 VA 4.3 VA 4.3 VA 4.3 VA 0.51 0.56 1.9 W closing delay 50 80 ms		4.3 VA
■ at 60 Hz inductive power factor with the holding power of the coil ■ at 50 Hz ■ at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC closing delay ■ at AC 4.3 VA 4.3 VA 4.3 VA 4.3 VA 4.3 VA 1.50 1.50 1.50 1.9 W		
inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz Closing power of magnet coil at DC holding power of magnet coil at DC 1.9 W closing delay • at AC 50 80 ms	● at 50 Hz	3.9 VA
• at 50 Hz • at 60 Hz • at 60 Hz closing power of magnet coil at DC tholding power of magnet coil at DC tolsing delay • at AC • at AC		4.3 VA
● at 60 Hz closing power of magnet coil at DC 14.3 W holding power of magnet coil at DC 1.9 W closing delay ● at AC 50 80 ms	inductive power factor with the holding power of the coil	
closing power of magnet coil at DC holding power of magnet coil at DC 1.9 W closing delay • at AC 50 80 ms	● at 50 Hz	0.51
holding power of magnet coil at DC closing delay ● at AC 50 80 ms	● at 60 Hz	0.56
closing delay • at AC 50 80 ms		
• at AC 50 80 ms		1.9 W
	closing delay	
• at DC 50 80 ms	• at AC	50 80 ms
	• at DC	50 80 ms

opening delay	
• at AC	30 50 ms
• at DC	30 50 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	1
contact	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
 at 230 V rated value 	10 A
 at 400 V rated value 	3 A
● at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1.4
at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
 at 480 V rated value 	7.6 A
at 600 V rated value	9 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	1 hp
— at 230 V rated value	1 hp
• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit with type of coordination 1 required.	aC: 62A (600V 100kA) aM: 22A (600V 100kA) DC00; 62A (445V 00kA)
— with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
for short-circuit protection of the auxiliary switch required Installation/mounting/dimensions	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	1/4000
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	85 mm
width	45 mm

depth	107 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
 for AWG cables for main contacts 	2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	
• solid	1 10 mm²
• stranded	1 10 mm²
 finely stranded with core end processing 	1 10 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.5 2.5 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
type of connectable conductor cross-sections	
 for auxiliary contacts 	
 solid or stranded 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 for AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross	
section	400
• for main contacts	16 8
for auxiliary contacts Sofaty related data	20 14
Safety related data	
product function	Vee
mirror contact according to IEC 60947-4-1 positively driven exerction according to IEC 60047-5-1.	Yes
positively driven operation according to IEC 60947-5-1 a quitable for acfety function.	No Yee
suitable for safety related quitabling OFF	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures • with low demand rate according to SN 31920	40 %
with low demand rate according to SN 31920 with high demand rate according to SN 31920	40 %
with high demand rate according to SN 31920 B10 value with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN	100 FIT
31920	
ISO 13849	

overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	

General Product Approval







Confirmation



KC

General	Product Ap-	
proval		

EMV

Test Certificates

Marine / Shipping





Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report





Marine / Shipping











Miscellaneous

other

Confirmation

Railway

Dangerous goods

Environment

Special Test Certific-<u>ate</u>

Transport Information



Environmental Con-firmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2023-1NP30

Cax online generator

t.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1NP30

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1NP30

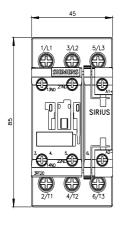
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

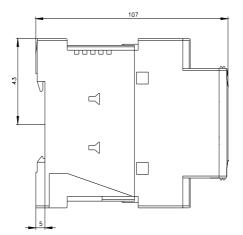
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-1NP30&lang=en

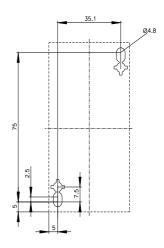
Characteristic: Tripping characteristics, I2t, Let-through current

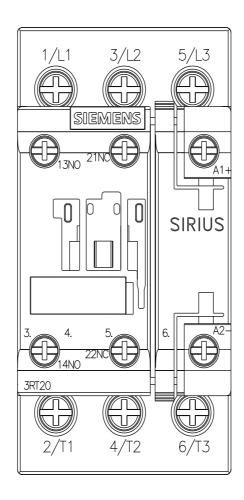
Further characteristics (e.g. electrical endurance, switching frequency)

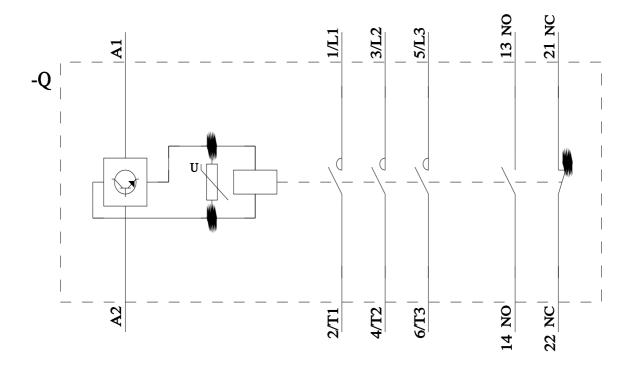
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2023-1NP30&objecttype=14&gridview=view1











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